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NATIONAL PHOTOGRAPHIC
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**BASIC
IMAGERY
INTERPRETATION
REPORT**

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IRKUTSK AIRFRAME PLANT 39 (S)

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STRATEGIC WEAPONS INDUSTRIAL FACILITIES
USSR
APRIL 1979

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RCA-09/0050/78

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INSTALLATION OR ACTIVITY NAME		COUNTRY		
Irkutsk Airframe Plant 39		UR		
UTM COORDINATES NA	GEOGRAPHIC COORDINATES 52-21-31N 104-12-16E	CATEGORY	BE NO.	COMIREX NO.
MAP REFERENCE PACAF. USATC, Series 200, Sheet 0200-22, scale 1:200,000				
LATEST IMAGERY USED	NEGATION DATE (If required)			25X1
	NA			25X1

ABSTRACT

1. (TSRZU) Irkutsk Airframe Plant 39 is in the Trans-Baikal Military District of the USSR, 9.8 kilometers (km) northwest of the center of the city of Irkutsk and approximately 178 km northeast of the nearest point on the Soviet-Mongolian border. At present, Plant 39 is involved in the production of the trainer (FLOGGER C) and the ground attack (FLOGGER D/F) variants of the FLOGGER fighter, as well as component parts for the BACKFIRE bomber. The plant contains 111 buildings (not including minor support buildings) and [] of floorspace. Another [] of floorspace are under construction.

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2. (TSR) This report includes a description of Irkutsk Airframe Plant 39 and its collocated test and flyaway field, Irkutsk Northwest Airfield. A brief history of the plant and a discussion of its production activity since its initial imaging on KEYHOLE photography of [] (Mission 9044) are also included.

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3. (TSR) This report includes a location map, eight annotated photographs, and two tables, one of mensural and chronological data, and one of production data. The information cutoff date for this report is []. The information contained in this report satisfies the basic reporting requirement for this target.

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INTRODUCTION

4. (S/WNINTEL) Irkutsk Airframe Plant 39 is in an industrial area along the Angara River (Figures 1 and 2). It is 2.0 km south of the nearest point of the river, 9.8 km northwest of the

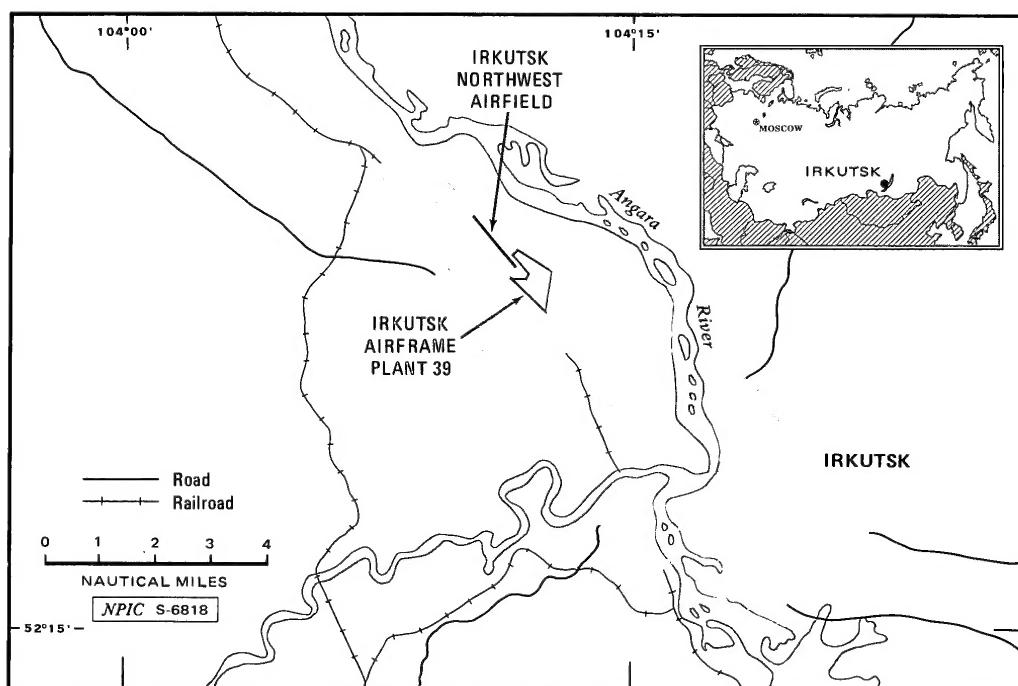


FIGURE 1. LOCATION OF IRKUTSK AIRFRAME PLANT 39, USSR

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center of the city of Irkutsk, and approximately 178 km northeast of the nearest point on the Mongolian border. Irkutsk Northwest Airfield [] is collocated with the plant and serves as its test and flyaway field (Figures 2 and 3).

5. (TSR) There has been little recent construction at Plant 39. Since the plant was first imaged on large-scale satellite photography in 1966, only [] of floorspace have been completed.

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BASIC DESCRIPTION

Plant History

6. (S/WNINTEL) Irkutsk Airframe Plant 39 was originally known as Irkutsk Aircraft Plant Stalin 125 when construction began in mid-1932. Construction was completed by mid-1934 and aircraft have been produced at the plant ever since. The plant was expanded in December 1941 when the evacuated Aircraft Plant 39 from Moscow was added. During World War II the Plant received awards for its output.¹

7. (S) Since the end of World War II, Plant 39 has been involved in several aircraft fabrication programs. In succession, the BAT (TU-2), BOSUN (TU-14), BEAGLE (IL-28), and CUB (AN-12) were produced at the plant. In 1960, the plant began production of the BREWER/MAESTRO (YAK-28/28U). COKE (AN-24) and FLOGGER (MiG-23/27) have also been produced at the plant.²

Construction

8. (TSR) Irkutsk Airframe Plant 39 was first observed on satellite imagery of poor interpretability in August 1962. Plant 39 has undergone little change since 1962, and its basic configuration remains the same. The plant covers 118.5 hectares of land and is road, rail, and air served. The plant is dominated by its only assembly/final assembly building (Figure 3 and Table 1, item 97). Sections a and b of item 97 were already complete when the plant was observed in 1962, but only eight bays of section c and none of section d had been completed. Two more bays in section c had been completed by []. The remaining three bays in section c and all of section d had been completed by []. (Dotted lines on Figure 3 indicate portions of section c which were completed by dates specified in the "Remarks" section of Table 1). The construction status of only two other buildings—the final checkout hangar (item 43) and the maintenance building (item 49)—could be confirmed on the imagery of []. Both buildings were complete by that date. Other buildings were probably complete by August 1962, but the image interpretability precluded a determination of their status.

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9. (TSR) With the receipt of the first [] the construction status of the remaining buildings was determined. On Figure 3, those buildings and sections of buildings which were confirmed as complete by [] are outlined in black. Buildings and sections of buildings which have been completed since that time are outlined in red.

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10. (TSR) A new final checkout hangar (item 50) in the late stage of construction was the only major building project still in progress at Plant 39 as of []. The hangar bay section is much larger than either hangar bay of the older final checkout hangar (item 43). The new hangar is [] and contains [] square meters of floorspace, while the sections of the old building are [] and contain [] of floorspace, respectively. In addition, two nearby associated personnel shelters (items 50d and e) adjoining the new hangar are also in the late stage of construction.

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Irkutsk Northwest Airfield

11. (S/WNINTEL) Irkutsk Northwest Airfield is the test and flyaway field for Plant 39. The airfield is immediately adjacent to the northwestern boundary of the plant (Figure 2). The reference point (RP) is the middle of the concrete runway.

12. (TSR) The airfield (Figure 4) has a single serviceable concrete runway with overall dimensions of 2,513 by 70 meters. The runway is oriented on a northwest/southeast [] degree azimuth. The concrete runway is paralleled by a sod runway which is approximately 2,084 meters long.

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Table 1.
Irkutsk Airframe Plant 39, USSR
(Keyed to Figure 3)

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Item	Description	Dimensions (m)			Floorspace (sq m)	Date Observed	Dimensions (m)	Dimensions (m)			Floorspace (sq m)	Date Observed	Dimensions (m)	Dimensions (m)			Floorspace (sq m)	Date Observed	Remarks	
		L	W	H				L	W	H			L	W	H					
1	Storage bldg						47	Storage bldg					82	Shop bldg						
2	Storage bldg						48	Storage bldg					83	Support bldg						
3	Storage bldg						49	Assembly bldg					84	Support bldg						
4	Storage bldg						50	Final checkout					85	Support bldg						
5	Storage bldg						Hangar					86	Subassembly eng/eng							
6	Storage bldg						a	Admin sec				87	Support bldg							
7	Storage bldg						b	Shop sec				88	Support bldg							
8	Support bldg						c	Admin sec				89	Support bldg							
9	Refurbishment bldg/warehouse						d	Personnel shelter				90	Shop bldg							
10	Carpentry shop						91	Support bldg				91	Powerplant							
11	Support bldg						92	Storage bldg				92	Support bldg							
12	Support bldg						93	Storage tank				93	Storage bldg							
13	Workshop/assembly bldg						94	Storage tank				94	Storage bldg							
14	Support bldg						95	Storage tank				95	Support bldg							
15	Storage bldg						96	Storage tank				96	Shop bldg							
16	Storage bldg						97	Storage bldg				97	Assembly/finishing bldg							
17	Storage bldg						98	Storage bldg				98	Shop bldg							
18	Storage bldg						99	Storage bldg				99	Support bldg							
19	Support bldg						100	Storage bldg				100	Security bldg							
20	Storage bldg						101	Shop bldg				101	Shop bldg							
21	Storage bldg						102	Support bldg				102	Admin bldg							
22	Storage bldg						103	Support bldg				103	Admin bldg							
23	Storage bldg						104	Support bldg				104	Support bldg							
24	Support bldg						105	Storage bldg				105	Storage bldg							
25	Storage bldg						a	See 1				a	See 1							
26	Storage bldg						b	See 2				b	See 2							
27	Subassembly bldg						106	Support bldg				106	Support bldg							
28	Storage bldg						107	Shop bldg				107	Shop bldg							
29	Warehouse						a	Admin sec				a	Admin sec							
30	Storage bldg						b	Shop sec				b	Shop sec							
31	Warehouse						c	Admin/engineer sec				c	Admin/engineer sec							
32	Warehouse						d	Shop sec				d	Shop sec							
33	Storage bldg						108	Support bldg				108	Support bldg							
34	Storage bldg						109	Support bldg				109	Support bldg							
35	Support bldg						110	Storage bldg				110	Storage bldg							
36	Storage bldg						111	Storage bldg				111	Storage bldg							
37	Storage bldg						a	See 1				a	See 1							
38	Warehouse						b	See 2				b	See 2							
39	Storage bldg						112	Storage bldg				112	Storage bldg							
40	Shop bldg						113	Storage bldg				113	Storage bldg							
41	Storage bldg						114	Storage bldg				114	Storage bldg							
42	Support bldg						115	Storage bldg				115	Storage bldg							
43	Final checkout						116	Storage bldg				116	Storage bldg							
							Hangar													
							a	Hangar sec												
							b	Admin/engineer sec												
							c	Hangar sec												
							d	Admin/engineer sec												
44	Refurbishing bldg						117	Storage bldg				117	Storage bldg							
45	Storage bldg						118	Storage bldg				118	Storage bldg							
46	Storage bldg						119	Storage tanks (2)				119	Storage tanks (2)							
47	Storage bldg						120	Storage bldg				120	Storage bldg							
48	Quonset type						121	Storage bldg				121	Storage bldg							
49	Quonset type						122	Storage bldg				122	Storage bldg							
50	Quonset type						123	Storage bldg				123	Storage bldg							
51	Quonset type						124	Storage bldg				124	Storage bldg							
52	Quonset type						125	Storage bldg				125	Storage bldg							
53	Quonset type						126	Storage bldg				126	Storage bldg							
54	Quonset type						127	Storage bldg				127	Storage bldg							
55	Quonset type						128	Storage bldg				128	Storage bldg							
56	Quonset type						129	Storage bldg				129	Storage bldg							
57	Quonset type						130	Storage bldg				130	Storage bldg							
58	Quonset type						131	Storage bldg				131	Storage bldg							
59	Quonset type						132	Storage bldg				132	Storage bldg							
60	Quonset type						133	Storage bldg				133	Storage bldg							
61	Quonset type						134	Storage bldg				134	Storage bldg							
62	Quonset type						135	Storage bldg				135	Storage bldg							
63	Quonset type						136	Storage bldg				136	Storage bldg							
64	Quonset type						137	Storage bldg				137	Storage bldg							
65	Quonset type						138	Storage bldg				138	Storage bldg							
66	Quonset type						139	Storage bldg				139	Storage bldg							
67	Quonset type						140	Storage bldg				140	Storage bldg							
68	Quonset type						141	Storage bldg				141	Storage bldg							
69	Quonset type						142	Storage bldg				142	Storage bldg							
70	Quonset type						143	Storage bldg				143	Storage bldg							
71	Quonset type						144	Storage bldg				144	Storage bldg							
72	Quonset type						145	Storage bldg				145	Storage bldg							
73	Quonset type						146	Storage bldg				146	Storage bldg							
74	Quonset type						147	Support bldg				147	Support bldg							
75	Quonset type						148	Support bldg				148	Support bldg							
76	Quonset type						149	Support bldg				149	Support bldg							
77	Quonset type						150	Support bldg				150	Support bldg							
78	Quonset type						151	Support bldg				151	Support bldg							
79	Quonset type						152	Support bldg				152	Support bldg							
80	Storage tanks (2)						153	Support bldg				153	Support bldg							
81	Storage tank						154	Support bldg				154	Support bldg							
82	Storage tank						155	Support bldg				155	Support bldg							
83	Storage tank						156	Support bldg				156	Support bldg							
84	Storage tank						157	Support bldg				157	Support bldg							
85	Storage tank						158	Support bldg				158	Support bldg							
86	Storage tank						159	Support bldg				159	Support bldg							
87	Storage tank						160	Support bldg				160	Support bldg							
88	Storage tank						161	Support bldg				161	Support bldg							
89	Storage tank						162	Support bldg				162	Support bldg							
90	Storage tank						163	Support bldg				163	Support bldg							
91	Powerplant						164	Support bldg				164	Support bldg							
92	Support bldg						165	Support bldg				165	Support bldg							
93	Storage bldg						166	Support bldg				166	Support bldg							
94	Refurbishing bldg						167	Support bldg				167	Support bldg							
95	Support bldg						168	Support bldg				168	Support bldg							
96	Support bldg						169	Support bldg				169	Support bldg							
97	Assembly/finishing bldg						170	Support bldg				170	Support bldg							
98	Shop bldg						171	Support bldg				171	Support bldg							
99	Shop bldg						172	Support bldg				172	Support bldg							
100	Security bldg						173	Support bldg				173								

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13. (S/WNINTEL) The airfield is serviced by two short taxiways from the plant. Both extend to the plant production-associated parking apron at the airfield, one from the parking apron outside the assembly/final assembly building (Figure 3, item 97) and the other from the two bays of the old final checkout hangar (item 49). The plant production-associated parking apron serves not only as a parking facility for new aircraft but also as a short parallel taxiway for the airfield. The apron is connected to the main concrete runway by an end connecting link and a crossover link. The other parking area at the airfield is associated with the plant but does not support production aircraft. Instead, it supports transport aircraft that are probably related to logistics.

14. (TSR) Navigational aids at the airfield are an air-warning (AW) radar site, a ground-controlled approach (GCA) radar site, a short-range navigation radar site, an electronics site, threshold lights, and an inner marker beacon.

15. (TSR) Arresting wires are at the southeast end of the concrete runway. A POL storage area and a weapons/electronics test and calibration facility (Figure 5) are also at the airfield.

Production

16. (TSRZU) Since August 1962, three aircraft fabrication programs have taken place at this plant: BREWER/MAESTRO (YAK-28/YAK-28U), COKE (AN-24), and FLOGGER (MiG-23/27). Plant 39 is also involved in the production of BACKFIRE wing components.⁷⁴

17. (TSRZU) BREWER/MAESTRO production began in 1960 and continued until 1973.⁵ The highest number of BREWER observed at Plant 39 was 19 on imagery of [redacted]. BREWER continued to be seen through the first quarter of 1973 [redacted]. During the production life of the BREWER, a mean count of 5.6 BREWER were present on imagery of Plant 39. BREWER have been seen at the plant since 1973; however, the small numbers, usually only a single aircraft, indicate that they have been present for plant-level maintenance or retrofit rather than as part of a production program. BREWER were last seen at the plant on imagery of [redacted].

18. (TSR) COKE production at Plant 39 began in 1966 and probably continued through the third quarter of 1971. During this period, newly produced COKE were usually parked on the plant production-associated aircraft parking apron. No COKE have been observed parked on this apron since [redacted] COKE have been seen at Plant 39 since that time, but they were only in the logistics-associated parking area.

FLOGGER Production

19. (TSR) FLOGGER (MiG 23/27) were first observed at Plant 39 on [redacted]. Since that time three models have been observed: FLOGGER A (MiG-23), FLOGGER C (MiG-23), and FLOGGER D/F (MiG-27).

20. (TSR) FLOGGER A were observed twice at this plant, on imagery of [redacted]. On the first occasion, only one FLOGGER could be identified. On the second coverage, however, nine aircraft were present. Image interpretability precluded positive identification of FLOGGER A on other imagery acquired within the same timeframe as the two coverages cited above.

21. (TSR) FLOGGER C (Figure 6) were first observed at Plant 39 on imagery of [redacted] and have been identified, image interpretability permitting, on later coverages, most recently on imagery of [redacted].

22. (TSR) FLOGGER D/F (Figure 7) were first observed on imagery of [redacted] and have also been identified on later coverages, most recently on imagery of [redacted]. Image interpretability has not permitted differentiating the FLOGGER D from the FLOGGER F.

23. (TSR) Since FLOGGER were first identified at the plant, the numbers observed gradually increased to a high count of 56 on [redacted]. Throughout the remainder of 1973, the mean count of FLOGGER observed at Plant 39 was 12. This decline, and the continued low count of FLOGGER observed through mid-1977 (Table 2) suggests two possibilities—a slowdown in the production rate of FLOGGER at this plant during that period, or an accumulation of FLOGGER to unusually high levels from 1971 through March 1973.

24. (TSR) While the mean count of FLOGGER observed at Plant 39 in 1977 was 7.2 aircraft, dividing the year into two six-month periods revealed that the mean number of FLOGGER observed on coverages in the first half of the year was 3.8. Observations during the second half of the year increased to a mean count of 10.2.

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Table 2.
FLOGGER Aircraft Observed at Irkutsk Airframe Plant 39

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Year	Mean Number Observed	Standard Deviation*	High Count	Low Count	Usable Coverages	Remarks	
1971	3.3	3.6	9	0	9	First identification of FLOGGER [redacted] FLOGGER A [redacted] and FLOGGER C [redacted]	225X1 25X1
1972	35.0	12.9	52	21	5		25X1
1973	31.75	23.2	56	10	4	Highest count ever on [redacted] number declined to 14 by next coverage [redacted]	25X1
1974	6.5	5.7	19	1	11	First identification of FLOGGER D/F on [redacted]	25X1
1975	11.0	6.8	23	3	6		25X1
1976	10.25	3.4	14	6	4		25X1
1977	7.2	5.5	25	1	19	High count seen on [redacted] imagery, second highest count [redacted]	25X1
1978	18.7	6.5	31	7	32	[redacted] imagery showed highest count since [redacted]	25X1 25X1 25X1

*Applies to mean numbers observed.

25. (TSR) The mean number of FLOGGER observed at Plant 39 continued to increase during 1978, slowly during the first half of the year (with a mean of 11.5), and more rapidly during the last half of the year (with a mean of 21.3). On the last coverage available for this report, 5 December 1978, 31 FLOGGER were observed at the plant, the highest count since the high count observed in March 1973. If this increase in the number of FLOGGER observed and/or produced continues, it could explain the need for the new final checkout hangar (item 50, Figure 3).

BACKFIRE Component Production

26. (TSRZU) Irkutsk Airframe Plant 39 is probably involved in the production of components for the BACKFIRE bomber. Although there has been no photographically derived confirmation of this, information obtained from other sources^{3,4} suggests that this is the case. Information derived from intercepted communications between Plant 39 and Kazan Airframe Plant Gorbunov 22 [redacted] the BACKFIRE production facility, in March and April 1977 indicated that BACKFIRE wing bolts were produced at Plant 39.⁴ Fuel system components for the BACKFIRE were also produced at Plant 39, which may be a subcontractor for the wings of the BACKFIRE version 45.03⁵ (BACKFIRE B).

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COCK Activity at Plant 39

27. (TSR) COCK aircraft have been observed at Plant 39 and the flyaway airfield several times (Figures 7 and 8), beginning with imagery of [redacted]. The COCK were probably involved with the shipment of FLOGGER aircraft. On one occasion, in February 1977 (Figure 8), two FLOGGER without wings were observed awaiting loading immediately behind a COCK. Transport aircraft at Plant 39 are usually observed in the logistics-associated aircraft parking area. COCK aircraft, however, have always been parked on the opposite side of the flyaway field. This, along with the observed loading activity, indicates that COCK are probably present for the purpose of airlifting FLOGGER aircraft.

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FOXBAT B/D with Unidentified Stores

28. (TSR) On [redacted] a FOXBAT B/D aircraft was observed at Irkutsk Plant 39 (Figure 9). This was the first sighting of a FOXBAT B/D at this plant. The sighting of the FOXBAT B/D was unusual not only because it was at this plant but also because unidentified stores were mounted on the aircraft, one under each wing. FOXBAT B and D are reconnaissance versions of FOXBAT; it is highly unusual to see them with stores mounted under their wings. The nature and use of the stores could not be determined. The FOXBAT B/D was present on two subsequent coverages, [redacted], but it has not been seen since. The September 1977 sighting at Irkutsk Plant 39 was only the second time that a FOXBAT B/D has been identified with mounted, unidentified stores. The only previous sighting was at Gorkiy Airframe Plant Ordzhonikidze 21 [redacted] Plant 21 is the manufacturer of FOXBAT aircraft.

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REFERENCES**IMAGERY**

(TSR) All applicable imagery of suitable interpretability through [redacted] was used in the preparation of this report. 25X1

MAPS OR CHARTS

PACAF. US Air Target Chart, Series 200, Sheet 0200-22, scale 1:200,000 (UNCLASSIFIED)
 DMAAC. Operation Navigation Chart, Series ONC, Sheet E-7, scale 1:100,000 (UNCLASSIFIED)

DOCUMENTS

1. USAF/AFCIN. Air Intelligence Information Report 1255840, *Irkutsk Aircraft Plant*, 29 May 59 (UNCLASSIFIED)

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3. NSA. K/00/5693-77, *Aircraft Plant 39, Irkutsk, Produces BACKFIRE Bomber Components*, 011653Z Jun 77 (TOP SECRET)

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4. NSA. K/00/3443-78, *Wings for BACKFIRE Bomber Probably to be Produced at Plant 39, Irkutsk*, 181456Z Apr 78 (TOP SECRET)

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5. DIA. DDB-1923-2-78-SAO. *Foreign Aircraft Production (FOAP), Communist World (U)*, May 78 (TOP SECRET)

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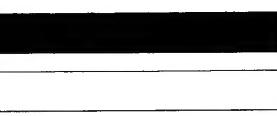
REQUIREMENT

COMIREX J02

Project 280018DJ

(S) Comments and queries regarding this report are welcome. They may be directed to [redacted] Warsaw
 Pact Forces Division, Imagery Exploitation Group, NPIC, [redacted] 25X1
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